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Oceans and the law of the sea

Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its fourteenth meeting

Letter dated 17 July 2013 from the Co-Chairs of the Consultative Process addressed to the President of the General Assembly

Pursuant to General Assembly resolution 67/78 of 11 December 2012, we were appointed as the Co-Chairs of the fourteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea.

We have the honour to submit to you the attached report on the work of the Informal Consultative Process at its fourteenth meeting, which was held at United Nations Headquarters from 17 to 20 June 2013. The outcome of the meeting consists of our summary of issues and ideas raised during the meeting and in particular, with regard to the topic of focus: "The impacts of ocean acidification on the marine environment".

In line with past practice, we kindly request that the present letter and the report of the Informal Consultative Process be circulated as a document of the sixty-eighth session of the General Assembly, under item 76 (a) of the preliminary list.

(*Signed*) Milan Jaya **Meetarbhan**
Don **MacKay**
Co-Chairs

* A/68/50.

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Fourteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

(17-20 June 2013)

Co-Chairs' summary of discussions[1]

1. The United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (the "Informal Consultative Process") held its fourteenth meeting from 17 to 20 June 2013 and, pursuant to General Assembly resolution 67/78, focused its discussions on the topic entitled "The impacts of ocean acidification on the marine environment".

2. The meeting was attended by representatives of 76 States, 13 intergovernmental organizations and other bodies and entities and 8 non-governmental organizations.[2]

3. The following supporting documentation was available to the meeting: (a) report of the Secretary-General on oceans and the law of the sea (A/68/71); and (b) format and annotated provisional agenda of the meeting (A/AC.259/L.14).

Agenda items 1 and 2
Opening of the meeting and adoption of the agenda

4. The two Co-Chairs, Don MacKay (New Zealand) and Milan Jaya Meetarbhan (Mauritius), appointed by the President of the General Assembly, opened the meeting.

5. Patricia O'Brien, Under-Secretary-General for Legal Affairs, and Thomas Stelzer, Assistant Secretary-General for Economic and Social Affairs, made opening remarks.

6. The meeting adopted the format and annotated provisional agenda and approved the proposed organization of work.

Agenda item 3
General exchange of views

7. A general exchange of views on the impacts of ocean acidification on the marine environment, as reflected below (paras. 8-18), took place at the plenary meetings on 17 and 19 June. The discussions held on the topic of focus within the Panel's segments are reflected in paragraphs 19 to 62 below.

8. Delegations expressed continued support for the Informal Consultative Process and highlighted the timeliness and critical importance of the topic of focus. They also expressed appreciation for the report of the Secretary-General on oceans and the law of the sea on the topic of focus of the fourteenth meeting (A/68/71).

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[1] The summary is intended for reference purposes only and not as a record of the discussions.

[2] A list of participants is available on the website of the Division for Ocean Affairs and the Law of the Sea at http://www.un.org/Depts/los/index.htm.

9. Delegations recalled that the United Nations Convention on the Law of the Sea ("the Convention") provided the legal framework for all activities in the oceans and seas, including in relation to the protection and preservation of the marine environment and ocean acidification. The role of the Convention in providing for the sustainable management of the oceans and their resources was also stressed. The provisions of the Convention on marine scientific research and the transfer of marine technology were highlighted as important when considering ocean acidification. In the light of the fact that ocean acidification resulted from the uptake of increasing amounts of carbon dioxide (CO_2) by the oceans, the United Nations Framework Convention on Climate Change and the Kyoto Protocol were also relevant instruments in that regard. It was observed that the Convention on Biological Diversity, the Montreal Protocol on Substances that Deplete the Ozone Layer and the London Convention and its Protocol, were also pertinent. Delegations stressed that the discussions at the meeting should focus only on the technical and scientific aspects of ocean acidification, and that policy or regulatory aspects should not be included.

10. The critical role of the oceans in the global carbon cycle was recalled. It was noted that the absorption of CO_2 emissions by the oceans had resulted in increasing acidity or lower pH of the oceans at a rate not seen in 30 million years. Delegations recognized that, although ocean acidification and climate change were separate phenomena, increased levels of CO_2 in the atmosphere contributed to both. In that regard, it was observed that, as long as CO_2 levels continued to increase, so would the acidification of the oceans. Concern was expressed that the cumulative effects of climate change and ocean acidification might cause changes in the marine environment at a pace such that marine ecosystems and species would not have sufficient time to adapt.

11. Delegations highlighted the wide range of impacts of ocean acidification on the oceans and marine organisms. They recognized that ocean acidification was a global threat which directly affected important components of the ocean food web, such as primary producers (plankton), coral reefs, shellfish and crustaceans. In particular, impacts on the ability of key marine organisms to build shells and skeletal structures and to deal with physiological stress were highlighted, along with impacts on coral reef-building organisms and the resulting effects on net global coral reef coverage. Marine species that were important in capture fisheries and mariculture were also impacted, as was the transmission of sound in the oceans. These impacts could threaten protein supply and food security for millions of people, as well as the fishing industry. Social and cultural structures could also be negatively impacted. In that regard, delegations highlighted the fact that ocean acidification undermined the social, economic and environmental pillars of sustainable development.

12. In addition to the risk of loss of territory for those islands which are composed of reefs, delegations stressed that such impacts revealed that ocean acidification not only constituted a challenge for sustainable development and the marine environment, but also a serious threat to the survival of many countries. Many delegations noted that the impacts of ocean acidification disproportionately affected developing countries, particularly small island developing States and developing coastal States.

13. Many delegations recalled that knowledge about the impacts of ocean acidification on the marine environment was still limited. Given the fact that research on ocean acidification was relatively new, delegations stressed the need for additional research on the impact of ocean acidification on marine ecosystems, including with a view to assessing their economic and social consequences, as well as assisting in the development of mitigation and adaptation policies. Many delegations called for the implementation of paragraph 166 of the outcome document of the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, in June 2012, entitled "The future we want", particularly with regard to the need to support marine scientific research and monitoring of ocean acidification, including through enhanced cooperation. Some delegations also highlighted the need for enhanced information and data-sharing. In particular, support was expressed by several delegations for a global ocean acidification observing network. The need for practical procedures to monitor ocean acidification was also highlighted.

14. Many delegations provided information on their research activities related to ocean acidification, including efforts to monitor, assess and address its impacts. The need to build capacity to strengthen and expand research programmes, including through transfer of technology and training fellowships, was emphasized. In this context, the establishment of the Ocean Acidification International Coordination Centre of the International Atomic Energy Agency (IAEA) was noted.

15. With regard to the mitigation of ocean acidification, delegations stressed that the principal mitigation measure was the reduction of CO_2 emissions. The potential of other mitigation methods, such as carbon capture and storage, was also noted by several delegations. At the same time, the need for caution and for additional research, including on the possible deleterious side effects of such methods, was highlighted. There was a call for a precautionary approach to be fully applied with regard to ocean fertilization and ocean geoengineering which, it was considered, could cause more devastating problems than they solved. The importance of maintaining and restoring carbon sinks, reducing energy demand and developing renewable sources of energy was also emphasized.

16. The importance of adaptation measures was emphasized. In this context, several delegations highlighted the need to also reduce the impacts of other stressors on the marine environment, including pollution, coastal erosion, destructive fishing practices and overfishing, in order to enhance the resiliency of marine ecosystems to ocean acidification. In that regard, the importance of tools, such as environmental impact assessments, marine protected areas and marine spatial planning, as well as the need for improved fisheries management, was noted. It was observed, however, that some fishing activities, in particular illegal, unreported and unregulated fishing, could aggravate the impacts of ocean acidification by affecting ecosystem health, but that fisheries were also impacted by ocean acidification. Many delegations expressed the view that the establishment of marine protected areas could help to build the resilience of marine ecosystems, including by addressing a range of stressors and cumulative impacts. It was observed that the development of adaptive strategies presented a challenge for some States. In that regard, the need for enhanced capacity-building for ecosystem management was also noted.

17. Delegations highlighted the importance of international cooperation and coordination in dealing with ocean acidification and its impacts on the marine

environment, including through existing mechanisms such as the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-economic Aspects ("Regular Process"). The view was expressed that initiatives such as the International Ocean Carbon Coordination Project were also relevant in that regard. It was suggested that international cooperation and coordination should be a priority, in order to avoid competition among projects and achieve complementarities. The view was expressed that initiatives such as the Regular Process were an important aspect of international cooperation and that such processes must also take into account the needs and concerns of developing countries. The benefits of cooperation in providing the best available scientific information on the impacts of ocean acidification to policymakers were highlighted. A suggestion was made, in this regard, that expanded research and targeted management and policy responses needed to be undertaken in ways that were mutually supportive and responsive. It was also noted that scientific work should be conducted in formats that were appropriate for policymakers.

Area of focus: impacts of ocean acidification on the marine environment

18. In accordance with the annotated agenda, discussions in the Panel segments were structured around: (a) the process of ocean acidification; (b) impacts of ocean acidification and ongoing activities at the global, regional and national levels to address those impacts; and (c) opportunities and challenges for addressing the impacts of ocean acidification on the marine environment, including through enhanced cooperation on scientific and technical aspects. The segments were launched by presentations from panellists, followed by interactive discussions.

1. The process of ocean acidification: impacts of ocean acidification and ongoing activities at the global, regional and national levels to address those impacts

(a) Panel presentations

19. In segment 1, Richard Feely, National Oceanic and Atmospheric Administration's Pacific Marine Environmental Laboratory (United States of America), focused on the science of the ocean acidification process. He illustrated how acidification was already taking place, noting a measurable increase in acidity at very rapid rates, including an expected increase of 100 to 150 per cent by the year 2100, compared to pre-industrial conditions, if current CO_2 emissions were not reduced. He also highlighted the increased vulnerability of certain areas, due to the combination of multiple stressors, in particular the Arctic, Antarctic, tropical regions and coastal regions, where upwelling exacerbated ocean acidification.

20. Juying Wang, China National Marine Environmental Monitoring Centre, explained how the changing carbonate equilibrium of the oceans would impact calcifying organisms and noted that, although the ocean acidification process was a global problem, coastal areas were particularly vulnerable to its impacts. She presented case studies of coastal acidification and an overview of China's research activities in that field. She suggested that questions for discussions may include: how to start ocean acidification observation, especially in developing countries; how to set up a standardized methodology for ocean acidification observation and research, and time-series observing stations; the relationship between ocean acidification and coastal acidification; and the impacts of ocean acidification on aquaculture.

21. In segment 2, Carol Turley, Plymouth Marine Laboratory (United Kingdom of Great Britain and Northern Ireland), focused on the projected alarming rate of changes to basic ocean chemistry over the next decades. She noted that those changes were already taking place, with negative impacts on the aquaculture industry and on natural populations, including key organisms within marine food webs. They would result in future losses of some of the keystone species from polar to tropical waters, altering pelagic and benthic ecosystems and the food webs they supported. Ms. Turley also noted the difficulty and uncertainty of predicting what complex ocean ecosystems and their food webs would look like in the future.

22. Yoshihisa Shirayama, Japan Agency for Marine-Earth Science and Technology, presented the outcome of long-term experiments conducted in order to assess future impacts of ocean acidification on marine organisms. He also presented information on the predicted future distribution of corals and its relevance to the identification of ecologically or biologically sensitive areas and the establishment of marine protected areas.

23. Nathalie Jeanne-Marie Hilmi, Centre Scientifique de Monaco, presented the outcome and recommendations of two international interdisciplinary workshops on the economics of ocean acidification and on the impacts of ocean acidification on fisheries and aquaculture, respectively. She highlighted some conclusions, noting that knowledge of the impacts of ocean acidification, particularly on fisheries, was still insufficient and that there was a need for more research in that regard.

24. Carol Turley, on behalf of Cliff Law, New Zealand National Institute of Water and Atmospheric Research, presented time-series data indicating ongoing and future acidification in the South-West Pacific region. Considerations related to the potential impacts of increased dissolved carbon dioxide and reduced carbonate saturation on marine ecosystems and the services they provide, including with regard to the impact of ocean acidification on pelagic surface water ecosystems and invertebrates and on cold-water coral were also highlighted.

25. Bill Dewey, Taylor Shellfish Farms, stated that the significant decline in oyster larvae production registered in a major shellfish hatchery on the west coast of the United States of America was an illustration of the consequences of changes in seawater chemistry as a result of ocean acidification. He described the efforts to address the regression in production through real-time monitoring and seawater treatment systems to manipulate seawater chemistry.

26. Yimnang Golbuu, Palau International Coral Reef Center, spoke about the importance of coral reefs for Palau and other coastal States. He drew attention to some coral reef areas in Palau which seemed more resilient to high temperature and high acidity conditions and noted the need for further studies to be undertaken to better understand the nature and resiliency of those special habitats. He stressed the importance of the establishment of a network of marine protected areas to safeguard those resilient sites.

27. Robert B. Dunbar, Stanford University, focused on the interconnectedness between the economic livelihood of many small island developing States and healthy coral reefs. He suggested pathways to address the impacts of ocean acidification by reducing the cumulative effects of multiple stressors.

(b) Panel discussions

28. The urgent need to reduce CO_2 emissions to effectively mitigate ocean acidification in the long term was stressed. A panellist noted that, although the depth in the oceans above which calcification could occur and below which carbonates readily dissolved, that is, the saturation horizon, was considered a tipping point for the impacts of ocean acidification, the effects would start to be felt before that threshold was reached. It was also noted that ocean acidity levels did not remain constant, but changed cyclically and seasonally. It was observed that some marine areas, such as polar areas and coastal areas, would experience greater levels of ocean acidification in the short term because of their particular characteristics.

29. Delegations expressed concern about the potential impacts of ocean acidification on the marine environment, as well as on the communities and industries that relied on it.

30. A panellist pointed out that there had been past instances of high levels of ocean acidification due to volcanic activity, which had led to mass species extinctions, but that they had occurred over a longer period of time. Notably, the speed and scale of the current change in acidity levels was unprecedented in the last 60 million, or possibly even 300 million, years.

31. Concern was also expressed about the impacts of ocean acidification on both warm and cold-water corals. A panellist noted that, while some species of coral exhibited resiliency to bleaching (caused by warming), additional research was needed to fully understand the origins of such resiliency. In that regard, the extent to which the increased resilience of certain types of corals was based on genetics was unknown. A panellist suggested that the relative resiliency of different strains of algae species symbiotically associated with certain types of coral might be a factor. Another panellist observed that understanding the origins of resiliency was particularly important for many small island developing States in the light, inter alia, of the role played by healthy coral in mitigating the effects of sea level rise. The comment was made that, despite hopes of resilience by some coral species, the overwhelming scientific evidence was that the area of the ocean that was able to support healthy corals (both tropical and cold-water) would be dramatically reduced in forthcoming decades.

32. Concern was expressed about the possible effect of ocean acidification on sound absorption in the oceans and its impact on marine mammals. In that regard, a panellist pointed out that sound velocity was affected and could interfere with the ability of some species to locate, for example, food and mating partners. Another panellist added that transmission of lower frequencies would be more affected, suggesting possible impacts on large marine mammals, such as whales and other cetaceans.

33. With regard to the socioeconomic impacts of ocean acidification on communities reliant on coral reefs, panellists noted that these ecosystems played an important role in the fishing sector, the aquaculture industry and the tourism and leisure sectors in terms of economic revenue and livelihoods. They also played a key role in protecting coastlines and had, in particular, significant social and cultural value for island communities. The view was expressed, however, that, conversely, tourism might also contribute to CO_2 emissions, thereby exacerbating ocean acidification.

34. The particular sensitivity of small island developing States to the impacts of ocean acidification was underscored. It was noted that many small island developing States relied on coral reefs for their economic, social and cultural well-being and that one third of those States were made up of coral reefs.

35. In the light of the importance of the environmental, social and economic impacts of ocean acidification on the marine environment, the suggestion was made that ocean acidification be included in an oceans sustainable development goal.

36. Consideration was given to measures to improve the ability of the marine environment to withstand the adverse effects of ocean acidification. In that regard, the view was expressed that the only effective long-term mitigation measure at the global level would be to reduce CO_2 emissions. A panellist noted that, given the slow pace of circulation of water between the upper level of the ocean, where CO_2 was absorbed, and the bottom of the ocean, where CO_2 could be buffered and the effects of ocean acidification neutralized, increases in CO_2 in the atmosphere substantially lengthened recovery time. However, a significant reduction in carbon emissions could minimize the impacts of ocean acidification and shorten the recovery time to hundreds of years from tens or hundreds of thousands of years. Another panellist anticipated that, under the strong regulation scenarios considered by the Intergovernmental Panel on Climate Change, some coral species in Asia could survive the projected levels of ocean acidification.

37. Some panellists emphasized that efforts should be made to reduce the impacts of other stressors on vulnerable marine ecosystems and to build the resilience of threatened organisms and communities. The management of cumulative stressors at the local level and the sharing of information and know-how among stakeholders were recognized as valid ways to address the adverse impacts of ocean acidification. Some panellists also highlighted the possibility of increasing reliance on species more resilient to ocean acidification.

38. A panellist noted that the scope of protection required in marine protected areas to effectively address the impacts of ocean acidification could vary, depending on the circumstances. However, the aim should be to reduce the impacts of stressors, such as fishing, tourism, pollution and other activities with negative impacts. Panellists also observed that the establishment of marine protected areas would have to take into account the expected future impacts of ocean acidification on various areas or particular ecosystems. In that regard, it was noted that, for example, seamount areas would be more likely to remain above the rising saturation horizon and could therefore be less affected by ocean acidification.

39. A panellist suggested that, with access to timely scientific information, aquaculture industries could put in place more effective adaptation measures. The approach of oyster farms in the north-west of the United States of America in adapting to increased ocean acidification through monitoring and adaptive management was highlighted as an example for other similarly placed industries in other countries. However, a panellist noted that the success of that approach depended on the ability to effectively monitor and control water conditions in a contained environment and might no longer be effective as the oceans became more acidic.

40. It was observed that, given the global nature of the problem, coordinated action at the global, regional, national and local levels was needed to minimize the impacts of ocean acidification.

41. With regard to research needs, a panellist noted that, although research had increased in recent years, considerable knowledge gaps still remained and there was a particular need for long-term studies. Information was provided on the availability of a database of naturally acidic marine areas.

42. Consideration was given to how research could be prioritized. In that regard, a panellist noted that each State might have different priorities, depending on their particular situation. For instance, for some States, key areas for future research could include the impacts of ocean acidification on cold-water areas, the possible accelerating effects of retreating polar ice on ocean acidification, and how marine ecosystems and communities were affected over time. The adverse effect of ocean acidification on aquaculture should also be studied in terms of ensuring food security as global population increased.

43. In response to a question raised regarding the certainty of the available scientific information on ocean acidification, some panellists stressed that there was consensus among scientists with regard to some aspects, such as the fact that ocean chemistry would be changed by the increase of CO_2 in the atmosphere. However, there was less certainty with regard to the impacts of ocean acidification on coastal and deep sea areas, as illustrated by the discrepancies between observations and models due to the complexities of, and variations within, those areas. It was pointed out that important information could be derived from historical precedents and CO_2 vent areas where volcanic processes caused CO_2 to vent from submarine sediments, thus creating a natural low-pH environment. The fifth assessment report of the International Panel on Climate Change was expected to include additional information in regard to the level of certainty in existing scientific research.

44. A panellist also observed that little was known about how ocean acidification would affect the migratory patterns of highly migratory fish stocks, particularly since the ability to track such migrations over time was a recent development. However, given the fact that migratory patterns were likely to be based on conditions in the marine environment, they might be affected. Another panellist noted that initial estimates regarding the movement of fish stocks to colder waters in response to the warming of the oceans might be reconsidered in the light of the higher rate of ocean acidification in colder waters.

45. Uncertainty still existed also with regard to the impacts of ocean acidification on some species. For instance, it was not known whether species in highly variable acidity levels would be more resistant to decreases in pH or were approaching a tipping point. It was noted that adult fish were believed to be less sensitive to changes in pH than larvae and juvenile fish.

46. Some delegations highlighted the importance of capacity-building in the light of the technical and specialized nature and cost of the research required to observe and monitor ocean acidification and its impacts. A panellist observed that building the capacity of States around the world, including developing countries, to measure and monitor ocean acidification would help to develop an understanding of what was occurring at both the global and local levels, and allow policymakers to have an early warning of potential impacts on marine ecosystems. In that regard, reference was made to efforts to develop a global ocean acidification observing network. Another panellist stressed the need to encourage partnerships between developed and developing countries to address that issue. The transfer of existing knowledge to developing countries was also considered important.

2. Opportunities and challenges for addressing the impacts of ocean acidification on the marine environment, including through enhanced cooperation on scientific and technical aspects

(a) Panel presentations

47. Lisa Suatoni, Natural Resources Defense Council, provided an overview of actions at the local and ecosystem levels to reduce the impacts of ocean acidification. She emphasized that, even if the effects of ocean acidification on a species or an ecosystem could not be directly studied, reducing other stressors, including nitrogen pollution from run-off, sedimentation from dredging, and harvest pressures, would help to alleviate the effects of ocean acidification on individual organisms. She concluded her presentation by noting that many adaptation strategies required increased investments in scientific capacity and also highlighted the benefits of establishing marine protected areas.

48. Michel Warnau, International Atomic Energy Agency, informed the meeting about the Ocean Acidification International Coordination Centre of the IAEA Environmental Laboratories. He noted that the mandate of the Centre was to facilitate, promote and disseminate information about global activities on ocean acidification, with a view to providing a platform for an international observation network, experimentation in ocean acidification, capacity-building and the dissemination of ocean acidification data. He highlighted the effective and global cooperation of the project with other major national and international projects involved in ocean acidification research.

49. Libby Jewett, National Oceanic and Atmospheric Administration, informed the meeting about the Global Ocean Acidification Observing Network, a project developed in close liaison with the Ocean Acidification International Coordination Centre, and funded to date by national sources and through the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and associated bodies (Global Ocean Observing System and the International Ocean Carbon Coordination Project). She noted that the Network aimed at monitoring and observing how ocean chemistry was changing; identifying impacts on species and ecosystems; developing models to assess future impacts on ecosystems and human communities; and developing adaptation strategies. Ms. Jewett highlighted the need for additional observation sites in south-western Africa, north-western Africa, the Indian Ocean and the coral triangle and noted that near-shore areas would need a higher spatial and temporal coverage of observations than open ocean areas.

50. Ilana Wainer, Departamento de Oceanografia Física, Instituto Oceanográfico, Universidade de São Paulo, provided an overview of the science behind ocean acidification. She presented actions undertaken in Brazil to increase the resilience of healthy marine ecosystems, develop and strengthen human resources, enhance coastal monitoring activities, and improve coordination and capacity to conduct research. She observed that the specific needs of developing countries included: developing and strengthening human resources; procuring quantitative information and tools for political and economic decision makers; improving coordination and partnerships; and raising public awareness.

51. Germain Michel Ranjoanina, Madagascar Ministry of Foreign Affairs, considered measures to address ocean acidification from the African perspective.

He noted the challenges faced by African countries and stressed the need for awareness-raising, the establishment of monitoring and control stations in coastal waters, and the need to promote national capacity and institutional capacity-building.

(b) Panel discussions

52. Consideration was given to ways in which ocean acidification could be addressed, taking into account existing limitations in national capacity and the weakness in the implementation of the provisions of the Convention on the transfer of marine technology. In that regard, some delegations expressed interest in technology transfer and capacity-building opportunities, which could be offered through the Ocean Acidification International Coordination Centre. It was indicated that both the Centre and the Global Ocean Acidification Observing Network encouraged the active participation of all States and entities. In particular, States in those areas which were considered to be the most vulnerable to ocean acidification were invited to avail themselves of the capacity-building programmes of both entities.

53. It was also observed that the lack of capacity for dealing with ocean acidification could be overcome by reducing other stressors, with a view to improving ecosystem health and resilience to ocean acidification.

54. Given the fact that States might be developing different adaptation measures to deal with ocean acidification, the usefulness, particularly for developing countries, of establishing universally applicable guidelines was highlighted. Clarification was sought on the role of marine protected areas in areas beyond national jurisdiction with regard to assessment or mitigation of the impacts of ocean acidification. In that regard, some panellists observed that, similar to areas within national jurisdiction, such tools would allow a holistic approach to protecting marine ecosystems from existing and future threats by, inter alia, eliminating or reducing local stressors to improve ecosystem health and building resilience to ocean acidification.

55. A question was raised on ways in which the Ocean Acidification International Coordination Centre intended to expand its membership, and on how to join or support the initiative. A panellist explained that the initiative creating the Centre had come from member States of IAEA and that participation in the Centre was open to all States. The Centre could be supported through direct or in-kind contributions to the IAEA Peaceful Use Initiative. Data-sharing with the Centre was also encouraged.

56. It was clarified that, while the Centre did not focus specifically on fisheries, the Second International Workshop on Economics of Ocean Acidification, co-organized in November 2012 by IAEA and the Centre Scientifique de Monaco, with the participation of the Intergovernmental Oceanographic Commission of UNESCO, the United Nations Environment Programme and the Food and Agriculture Organization of the United Nations, had focused on the impacts of ocean acidification on fisheries and aquaculture and the economic consequences.

57. In relation to participation in the Global Ocean Acidification Observing Network, a panellist noted that awareness about the Network was being raised, including through capacity-building workshops. Some panellists emphasized the need for close coordination with other initiatives in order to avoid duplication. In that regard, the existing strong cooperation between the Network and other observation systems, including the Global Ocean Observing System, the International Ocean Carbon Coordination Project and the Group on Earth

Observations, was highlighted. It was noted that representatives of the first two observation systems had attended the first meeting on the Network.

58. Some delegations suggested that the Centre and the Network take into account, and contribute to, the work within the framework of the Regular Process, since it better encompassed the efforts of States and international organizations, and would ensure that the General Assembly could play a role in addressing ocean acidification. The view was also expressed that this would help to give more visibility to, and support for, those initiatives. The view was expressed that possible gaps and overlapping in the work of intergovernmental organizations in relation to novel or topical law of the sea issues gave rise to some concern. In that regard, the balanced manner in which the General Assembly was coordinating efforts between Governments and specialized agencies was highlighted.

59. Some delegations highlighted the need to strengthen cooperation between institutions and agencies that were studying ocean acidification and among Governments. Consideration was given to the key impediments to international cooperation, and how they could be overcome. In particular, some panellists observed that broad international cooperation networks existed, but that the greatest challenge was building scientific capacity in geographic areas which were likely to be the most vulnerable to ocean acidification. Another panellist noted that limited access to information was an impediment for collaboration within and between countries.

60. The consensus among scientists on the seriousness of ocean acidification to the sustainability of marine ecosystems, such as coral reefs, and the concerted efforts and progress in coordinating scientific initiatives in that regard, both among and within countries, were also highlighted. The view was expressed that, from a political standpoint, the issue of ocean acidification had not been sufficiently brought to the attention of decision makers, and that this presented a major challenge to international cooperation.

61. A panellist observed that international cooperation was important for dat. collection and dissemination. Several databases had been developed and there was a need to consolidate the available information. The need to make data publicly available was also emphasized, as was the need for a more integrated approach to marine scientific research. Reference was also made to the importance of ensuring standardized data and identification of used methodologies for the purpose of data management and interpretation.

62. Another panellist referred to some areas of the South Atlantic. She noted that, while a monitoring network was at an early planning stage, with funding proposals still being addressed, establishing linkages with other networks was crucial. In that regard, in Brazil, connections with other scientists around the world were being sought through the development of a Scientific Committee on Oceanic Research working group.

Agenda item 4
Inter-agency cooperation and coordination

63. Andrew Hudson, UN-Oceans Coordinator, reported on the activities of UN-Oceans and updated the meeting on follow-up actions to General Assembly resolutions 66/231 and 67/78. He said that, in accordance with paragraph 239 of

resolution 66/231, UN-Oceans had prepared new draft terms of reference for consideration by the Assembly at its sixty-seventh session. Mr. Hudson recalled the request contained in paragraph 267 of resolution 67/78 for UN-Oceans to prepare revised draft terms of reference for consideration by the General Assembly at its sixty-eighth session. He noted in that context that UN-Oceans had received a number of constructive comments from Member States, and that two constructive discussion sessions with Member States had been held in 2013 to share views on a number of aspects, including the UN-Oceans mandate, structure and modalities of work. The meeting was also updated on the tenth meeting of UN-Oceans during the closing days of the Yeosu Expo 2012 in the Republic of Korea.

64. The Coordinator was thanked on behalf of a group of delegations, for the update on the work of UN-Oceans. The importance of UN-Oceans remaining focused on facilitating United Nations system-wide coherence and the implementation of the existing mandates of United Nations entities, relevant General Assembly resolutions and conference outcome documents was emphasized. Many delegations welcomed the work done in strengthening the central role, within UN-Oceans, of the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs. Delegations recalled the importance of open consultations with Member States and transparency in the work of UN-Oceans and the review of its terms of reference, in keeping with the request of the General Assembly in its resolution 67/78. Delegations expressed their commitment to continue to work constructively in order to make progress on the terms of reference. Delegations looked forward to the consideration of the revised terms of reference during the informal consultations on the General Assembly resolution on oceans and the law of the sea in the latter part of the year.

65. Mr. Hudson reiterated the commitment of UN-Oceans to continuing its dialogue with Member States towards completing the draft terms of reference for formal presentation to the General Assembly at its sixty-eighth session.

66. Many delegations generally shared the Secretary-General's commitment to the conservation and sustainable use of the oceans and their resources. However, they also expressed concerns regarding the initiative entitled "The Oceans Compact: Healthy Oceans for Prosperity An Initiative of the United Nations Secretary-General" and the manner in which it was progressing, including with regard to the development of an action plan. They considered that the initiative of the Secretary-General sought to deal with issues relating to oceans and seas, but did not properly reflect the interests of Member States and the very delicate balance of rights, obligations and interests which should be taken into account. These delegations had reiterated their specific concerns about the Oceans Compact in a letter to the Secretary-General dated 14 March 2013. They recalled the request made in General Assembly resolution 67/78 for the Secretary-General to undertake open and regular consultations with Member States on all aspects of the initiative. The view was expressed that that request had not yet been fulfilled. Concern was also expressed regarding the establishment of an advisory group, as well as its functions, composition and the selection criteria for its members. Many delegations reiterated that they were not in a position to support the initiative as it currently stood, but remained ready to work in a truly consultative manner to address those concerns.

Agenda item 5
Process for the selection of topics and panellists, so as to facilitate the work of the General Assembly

67. The Co-Chairs introduced item 5, noting that it reflected paragraph 255 of General Assembly resolution 67/78. Delegations were invited to provide their views and make proposals on ways to devise a transparent, objective and inclusive process for the selection of topics and panellists, so as to facilitate the work of the General Assembly during the informal consultations concerning the annual resolution on oceans and the law of the sea. No delegation requested the floor under this agenda item.

Agenda item 6
Issues that could benefit from attention in the future work of the General Assembly on oceans and the law of the sea

68. The Co-Chairs drew attention to the composite streamlined list that they had prepared of issues that could benefit from attention in the future work of the General Assembly on oceans and the law of the sea.[3]

69. A proposal was made for the fifteenth meeting of the Informal Consultative Process to focus on potential and new uses of the oceans. It was suggested that the topic would allow delegations to be updated on the current and new sustainable uses of the oceans and that Member States, in particular small island developing States, would gain relevant knowledge. It was noted that the discussion on this topic could feed into the discussions at the Third International Conference on Small Island Developing States in 2014.

[3] Available at: www.un.org/depts/los/consultative_process/ICP14_Presentations/Composite_List_of_Issues_2013.pdf.